

Formative Evaluation to Guide Early Deployment of an Online Content Management Tool for Medical Curriculum

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Goal

To assess student satisfaction with KnowledgeMap (KM), an online tool for content management of the medical curriculum.

Background

KM is a Web-accessible, comprehensive database that organizes course materials (at the level of full lectures, not just outlines or syllabi) from the Vanderbilt School of Medicine curriculum.¹ KM uses natural language processing techniques to analyze educational documents for biomedical concepts. Lecture handouts and Microsoft® PowerPoint® presentations are indexed and available online for students, faculty and administrators to search for individual or interrelated concepts across the medical school curriculum.

Methods

We piloted KM with the first year anatomy course by providing 1) a home page that displayed all the lectures of the anatomy course and 2) a search feature to locate biomedical concepts in documents throughout the curriculum, and 3) a browse feature to locate all lectures of every class in the curriculum. At the conclusion of the anatomy course, medical students completed a survey that determined their overall satisfaction with KM and satisfaction with various components of KM. Students also had the option to provide narrative comments about their experience with KM.

Results

Eighty-one of 104 first-year students completed the survey. Sixty-four students (80%) were either satisfied or very satisfied with the tool. Comments from students, organized by subject matter are shown in figure 1. Figure 2 indicates student agreement, through 7-point Likert scales with usage-related statements.

Discussion:

This preliminary data reveals that students were generally satisfied with the inaugural offering of KM. One student's free-form comment was: "I think KM is a great program. It has helped me out immensely while [...] reviewing the lecture". Another student wrote down: "I love Knowledgemap". Students were

positive about the searching and browsing features of the tool, and called for more courses to be integrated into KM for their use. Technical problems mostly in the form of server downtime occurred but did not pose a major barrier to KM usage. Specific student comments have identified further development priorities for KM such as the introduction of an automated process for document conversion and indexing that has decreased our lag time between the uploading of documents to the system by teachers and availability for use by students.

Conclusion

Students want the KM system to improve and to expand into other courses in the medical school. Ongoing student feedback will assist developers to prioritize innovations to the system.

Figure 1. Free form comments. Percentages indicate the percentage of all respondents.

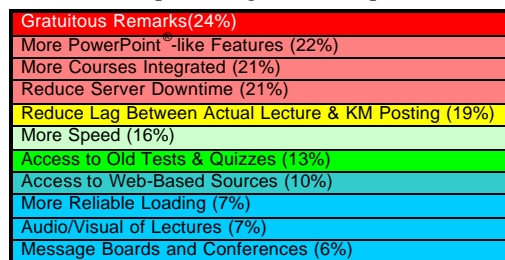


Figure 2.

Statement	Likert Scale*
Technical errors prevented me from accessing important information when I needed it.	3.6
Technical errors made me use KM less frequently	2.9
Browsing documents and the class schedule was convenient and easy	5.6
Using KM to search documents by keywords was convenient and easy	5.0

*7 point Likert Scale where 7 indicates strong agreement (4 neutral)

Reference

¹ Denny JC, Smithers JD, Miller RA, Spickard-III A. "Understanding" Medical School Curriculum using KnowledgeMap. J Am Med Inform Assoc, 2003: In press